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PROPOSALS FOR DEVELOPMENT OF FORESTRY EQUIPMENT IN GDR

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According to the 4 February 1954 decree of the Council of Ministers, the mechanization of forestry is to be speeded up. The Mechanization Department, in collaboration with the Department of Labor and Technology in the Main Administration for State Forestry Enterprises, presents for discussion by the Collective for Technology in Forestry the following development proposals:

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EQUIPMENT ALREADY IN DEVELOPMENT IN 1954

Attachments for single-axle tractors:

1. Cutting tail, with rigid cutting tools held on the working shaft by coupling. The cutting tail can be turned 90 degrees so that a planting-hole borer can be attached.

2. Planting-hole borer, to be developed along the lines already begun by the Branch Office for Forestry Technology in Menz, Professor Kienthal of Thereafter, and K. Scheuch of Erfurt.

3. Equipment carrier, for pulling various attachments, such as rollers, hoes, etc. Basic work begun by the Branch Office for Forestry Technology in Menz.

4. Front mowing beam, with a work width of 700 to 900 millimeters. On the basis of the recommendations of the DAL [unidentified] on 22 April 1954, the development of this moving beam has been removed from the plan.

5. Light forest-strip plow, with a 600-millimeter work width, a safety release gear, and a 15-horsepower maximum traction requirement. The basic data have already been turned over to the Central Design Office (Zentrales Konstruktions-Buero) by the Menz office.

6. Attachable cable winch, for single-axle and double-axle RS 08/15 tractor. A model for the double-axle tractor will be finished by Scheuch in Erfurt by June 1954. The Mechanization Department is responsible for the transfer of the basic data from Scheuch to the Central Design Office.

The Central Design Office in Leipzig is responsible for any other developments. Funds amounting to 120,000 DM have been made available to the Central Design Office for this purpose.

MACHINERY AND EQUIPMENT TO BE DEVELOPED IN 1954 ON THE BASIS OF THE COUNCIL OF MINISTERS' DECREE OF 4 FEBRUARY 1954

Internal-Combustion Engines

According to the Council of Ministers' decree mentioned above, a number of machines are to be produced soon after 1 January 1955 for which the IFA (People-Owned Enterprises for Vehicles and [illegible] Construction) works have not yet mass-produced any internal-combustion engines.

The following engines are needed by the forestry industry:

1. EL 35; one horsepower; 5,000 rpm; weight about 3 kilograms; needed for: grass-pulling machines, trimming machines [cutting branches off to make trees grow better], and electric generators (portable).

EL 150 SS; 6 horsepower; 9,000 rpm; weight 12-13 kilograms; needed for: one-man gasoline-powered chain saw, two-man gasoline-powered chain saw, lopping machine, trimming machine, grass-pulling equipment, electric generator, electric ax, drills for mapping work.

3. EL 350; 8 horsepower; 3,000 rpm; weight about 30 kilograms; needed for: loading winch, flexible-coupling circular saw (Gelenkkreissaege), conveyer belts, single-axle tractor.

4. TL 600; 15-20 horsepower; 2,000/3,000 rpm; weight about 60 kilograms; needed for: equipment carrier, cable winch, peeling machine, single-axle tractor.

One-Man Gasoline-Powered Chain Saws

Internal-combustion motor EL 150 SS; weight about 16 kilograms; convenient for one-man use in felling trees, dressing, and lopping; designed to be a universal piece of equipment for:

1. Two-man gasoline-powered chain saw, by making necessary alterations
2. Drill for drilling holes for mapping
3. Attachment of electric generator
4. Attachment of cable winch

Preliminary work is being done by Hache of Eberswalde, who is making the necessary data available to the Central Design Office. Completion date for the development work by the Central Design Office is 31 December 1954. Completion date for the prototype series (ten saws) is the first quarter of 1955.

Peeling Machine

Peels the bark off the wood and chops up the wood so that further processing of the fiber wood is not necessary at the cellulose factories. For use in the forest at small or large forming stations. Previous designs have been defective except in Sweden and Finland.

Proposals:

1. To send a study team to Finland or Sweden
2. To import a [illegible] model

The Central Design Office is taking over the development work, with 31 December 1954 as the conclusion date. Prototype series (ten units) is to be completed by the first quarter of 1955. The data available in the Main Administration for State Forestry Enterprises and in Menz were handed over to the Central Design Office in March.

Loading Crane

Proposed by Schroeder of the Neubrandenburg Administration of State Forestry Enterprises; to be used for loading stacked wood.

Requirement: The rotary crane is to be mounted on an "Ameise" truck or on a caterpillar chassis. Lifting height, 4 meters; lifting capacity, one ton; sweep, 3 meters. The Central Design Office is to finish study of plans in 1954.

Proposal: Import a 1954 loading crane from Czechoslovakia. Complete development of the crane in 1955.

Belt Conveyer

For loading stacked wood at large forming stations and at railroad loading points, for:

1. Horizontal transport
2. Vertical transport

Two models for vertical transport have already been completed by the Cossig Machinery and Conveyer-Equipment Company (date of completion was the end of May 1954). The testing is being done at Menz. The data will be made available to the Central Design Office by 31 August 1954. Development of equipment for both horizontal and vertical transport is to be completed by 31 December 1954. Prototype series (ten units) is to be completed by the first quarter of 1956.

Cross-Pulling Equipment ("Wiesel" system)

Professor Stentzel of Tharandt and Fritz Groos of Neustadt/Sachsen are turning over to the Central Design Office the data on research already carried out. The Central Design Office will complete design studies in 1954. The development will be completed in 1955.

Trimming Equipment

1. With EL 35 internal-combustion motor; 100-watt electric generator, 200 cycles per second; light 100-watt electric motor, 200 cycles per second, about 12,000 rpm.

2. With 150 SS internal-combustion engine; other specifications same as those in preceeding paragraph.

3. With single-axle tractor; other specifications same as those in preceeding paragraph.

The Central Design Office will complete design studies in 1954. The development and the production of the prototype series (ten units) will be finished by the end of 1955. Mass production will begin in the first quarter of 1956.

Lime Blower

1. Attached to a Maulwurf tractor; dispersion width: 50 meters.

2. Equipment with 100-meter dispersion width.

The Central Design Office will report on the status up to now. (Development work done by Scheuch and by Duennebeil and Stentzel). Development to be finished by 31 December 1954. Prototype series (five units) to be finished by second quarter of 1955.

Equipment for Spreading Blast-Furnace Slag (in granular form)

Principal research has been done in the Gera State Forestry Enterprise in Weida, with fine gravel. Menz is to report by 31 August 1954. The Central Design Office will complete design studies in 1954. Development work is to be completed in 1955.

Electric Generator (200-watt, 200 cycles per second, 3,000 rpm)

Development work is to be completed by the end of 1954.

Electric Motor (100-watt, 200 cycles per second, about 12,000 rpm)

Development work to be completed by the end of 1954.

Light Single-Pole Ladder (for harvesting cones)

Menz is giving the necessary data to the Central Design Office. Development work to be completed by 31 December 1954.

FURTHER DEVELOPMENT IN 1954

One-Man Electric Chain Saw (Fritz Gross, Neustadt/Sachsen)

Evaluation in Menz of the 20 saws in the prototype series, which are already in the State Forestry Enterprises. Final report by 31 July 1954. Completion of working drawings by the Central Design Office by 31 December 1954. Mass production by the first quarter of 1955. The necessary data from Fritz Gross are to be turned over to the mechanization department.

1. The electric saw is to be further refined so that lopping equipment can be attached. A model is already available. Testing is to be done at Menz, with a final report by 31 July 1954.

2. Further development of the electric saw, with the purpose of taking about 7 kilograms off its weight and of using 200 cycles per second instead of the previous 50 cycles per second.

Flexible-Coupling Circular Saw

On the basis of experience with the 80 saws of the Klotzsche MTS, a reworking of the design is considered necessary. The Central Design Office is responsible for the reworking. Target date for production is 31 December 1954. It will be necessary to engage the Mihoma Woodworking-Machinery Plant in Leipzig-Markranstaedt, Nordstrasse 8.

Motorized Cable Winch (for dragging wood in pathless areas such as mountains and marshes)

1. One model, attached to a Maulwurf tractor, has been completed by Scheuch of Erfurt. Completion date of the model: May 1954. The testing, to be done at Menz, is to be completed 1 October 1954. Scheuch is turning the necessary data over to the Central Design Office. The Mechanization Department is responsible for the project. The prototype series (five units) is to be finished in the first quarter of 1955. Mass production is to begin in the third quarter of 1955.

2. Portable Cable Winch for Rocky Areas. The Central Design Office is to finish the design studies by 31 December 1954. Development work is to be completed in 1955.

Cable Winch for the "Pionier" (tractor)

Four models have been undergoing tests in different State Forestry Enterprises since December 1953. Menz is to give the final report by 31 July 1954. The development work is to be finished by 31 December 1954. Mass production will begin in the first quarter of 1955.

Vertical Capstan Winch for KS 07/62 Tractor

The prototype series is in production at the IFA plant in Schoenebeck. Testing at Menz is to be completed by 31 December 1954. Development work is to be finished by the third quarter of 1955. Mass production will begin in the third quarter of 1955.

Motorized Cable Loading Winch (Aschersleben system)

Production to date, 150 units. In further development, previous experience and the suggestions of 8 April 1954 made by the winch collective are to be considered. The people-owned motor-vehicle plant in Aschersleben is responsible for this project.

Gallinor Cultivating Equipment (improved design)

As an attachment to the single-axle tractor, in accordance with the suggestion from Menz. Menz is to give the final report by 31 December 1954. Development work is to be completed by the end of 1954. The Central Design Office is responsible for this project. Prototype series is to be completed and tested in the second quarter of 1955.

Three-Ton and Five-Ton Wagons

These include hydraulic lifting equipment for logs and drag frames for stacked wood. The necessary data were furnished the Central Design Office by Menz and the Aschersleben motor-vehicle plant. The working drawings are to be finished by the Central Design Office by 31 December 1954. Mass production is to begin in the first quarter of 1955.

1955 DEVELOPMENTS

Electric Axe (similar to the USSR model)

Proposal: Import in 1954 one model from the USSR and one Bosch hammer from West Germany.

The development work based on the improvement proposals of the Galvano-Technik Company in Leipzig, started in the summer of 1953, has so far shown no results.

Ten-Ton Timber Trailer

Regular tires (einfach bereift), air brakes on both rear and front axles.

Four-Ton Truck for Rapid Transport

Three axles, with all-wheel drive, regular tires, flat coupling trailer, a swiveling bolster, and a cable winch located behind the cab and controlled from the cab by means of a shaft.

Motorized Cable Loading Winch

For loading timber, located behind the cab of a trailer truck and operated through a shaft (logs up to four cubic meters).

Concrete Breaker (for attaching to the KS 07/62 and the KS 12/45 tractors)

Subsoil Plow

Equipment for Cutting Firebreaks

General

The following points are to be considered in developing a single-axle tractor: The tractor must be suitable for clearing and maintenance work for camps, using a plow, a cultivator, a cutter, or a root-cutter; for cultivation work with cultivating equipment or grass-pulling equipment; for ground preparation work with a planting-hole borer; and for pulling a tool chest, a transport trailer, a drag wagon, insecticide equipment, an electric generator, or a motorized cable winch.

Tire Program

The following tires are needed:

1. Single-axle tractor

For normal use	6.00-16
For use in cultivation work (600-700-millimeter row widths)	4.00-19
For use under difficult conditions	7.00-18
For wheeled cultivators	4.00-12

2. Carts, drag wagons, timber wagons

For carts	4.00-100
For light hand-drawn equipment	A W 3.50-16
For 3-ton drag wagons	A W 190-20
For 5-ton drag wagons	A W 230-20

50X1-HUM

Forestry Tractor

Consideration of the requirements of forestry, particularly of wood transport, in developing the new 45-horsepower tractor. Ground clearance approximately 400 millimeters (with sprag), winch, electric starter, tire pump.

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